

REMARKS/ARGUMENTS

After the foregoing Amendment, claims 22-24, 27 and 28-34 are currently pending in this application. Claims 5-8, 17-18, 21 and 25-26 have been cancelled without prejudice. Claim 22 has been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 24 and 27 have been amended to more distinctly claim subject matter which the Applicant regards as the invention. New claims 28-34 have been added to more distinctly claim subject matter which the Applicant regards as the invention.

Allowable Subject Matter

The Examiner is thanked for indicating that claims 22-24 and 27 contain allowable subject matter.

Claim Objections

The Office Action objected to claim 21 because of an informality. Claim 21 has been cancelled, therefore this objection is now moot.

The Office Action objected to claims 22-24 as being dependent upon a rejected base claim. Claim 22 has been rewritten in independent form to include all of the limitations of the base claim and any intervening claims, and the base claim has

been cancelled. Claim 22 is now believed to be patentable. Claims 23-24 are dependent upon claim 22, and thus are also believed to be patentable. The withdrawal of the objection to claims 22-24 is respectfully requested.

Claim Rejections - 35 USC §103

Claims 5-8, 17-18, 21 and 25-26 stand rejected under 35 USC §103(a) as being unpatentable over prior art of record. These claims have been cancelled, therefore this rejection is now moot.

New claims 28-34 have been added to more distinctly claim subject matter which the Applicant regards as the invention. The present application discloses a method for adjusting the frequency of a receiver to more quickly synchronize the receiver with a transmitter during an initial cell search or power-up of a UE. Independent claim 28 discloses a method which performs the steps of:

(b) rotating a phase of a stored sequence at the estimated received frequency plus a given frequency amount, to form an increased rotated phase of the stored sequence;

(c) rotating a phase of the stored sequence at the estimated received frequency minus the given frequency amount, to form a decreased rotated phase of the stored sequence;

(d) correlating the received PSC sequence with the increased rotated phase of the stored sequence, and correlating the received PSC sequence with the decreased rotated phase of the stored sequence;

In other words, the frequency of the sequence phase is increased to a faster frequency (called an increased rotated phase) or decreased to a slower frequency (called a decreased rotated phase) than the estimated frequency of a received PSC. These increased and decreased rotated phases are correlated with the received PSC.

In contrast, the prior art of record does not teach rotating a phase of a sequence, thereby increasing or decreasing its frequency. Rather, the prior art teaches shifting the phase of a sequence in a positive and a negative direction. Thus, the phase (i.e., the phase angle) of the sequence is shifted, but the frequency of the sequence phase is not altered at all. Thus, claim 28 is easily distinguished from the prior art as to this limitation, and is therefore believed to be patentable over the prior art.

Finally, Applicant notes that in the Conclusion section of the Office Action, in paragraph 10, US 6,826,644 is cited as being pertinent to WCDMA initial cell searching with Step 1 processing. However, US 6,826,644 is not directed to wireless communications, but relates instead to a peripheral component interconnect (PCI) arbiter, presumably for use in a personal computer PCI bus.

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Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicant respectfully submits that the present application, including claims 22-24 and 27, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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